

# Study on Service design of high quality development of health care industry in new era

-- Evidence from the inner circle of Panzhihua's "Three Circles"

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**Abstract:** Under the background of the new era of implementing the national strategy of actively coping with the aging population, this study conducted an in-depth investigation on the development of the health care industry in Panzhihua, discussed the design of the various dimensions of the health care service quality and its relationship with customer satisfaction, developed the modern health care service quality measurement scale of Panzhihua, boosting the health care industry to achieve high-quality development.

Key words: Panzhihua; health care industry; Modern service; Design research

# 1. Overview of the research

China has entered a new era of population aging, and has implemented a national strategy to actively cope with population aging. As a modern service industry, health care services will play an important role in the scientific response to aging. Panzhihua is an international sunshine health care tourism destination, but among the "three circles" of Panzhihua, especially the "inner circle", there is no in-depth systematic research on the design of high-quality health care services. This study makes up for the deficiency and plays an active role in promoting the "three circle layers", especially the "inner circle" health care service industry in Panzhihua. This study is also a practical application of the integration of industry and education in the health care industry in my postdoctoral research field of Cambridge University.

# 2. Research framework and hypothesis

Refer to Parasuraman et al for the establishment of the perspective of health care service quality in this study. The five dimensions of service quality are proposed, including tangibility, reliability, responsiveness, assurance and empathy. The research hypotheses are as follows:

Each dimension of H1: health care service quality is positively correlated with customer satisfaction. H2: The health care service quality is positively correlated with customer satisfaction, and the influence is stronger for foreign customers than for local customers. H3: Health care service quality is positively correlated with customer satisfaction, which affects female customers more than male customers. H4: The health care service quality is positively correlated with customer satisfaction, and the customers with high education level are lower than those with low education level.

## 3. Research methods

In this study, a preliminary questionnaire was designed on the basis of literature discussion, and the final questionnaire was determined after the questionnaire pre-test, and then the questionnaire was collected by field survey. The analysis method adopted in this study is the factor analysis provided by SPSS software.

# 4. Research analysis

4.1 Sample Distribution

This study conducted a pre-questionnaire test in Panzhihua in June 2022, and conducted an in-depth questionnaire data survey from July to August 2022 after statistical analysis and detection of factors and reliability. A total of 260 special questionnaires were sent out, 255 were recovered, 250 were valid, and the effective questionnaire recovery rate was 96.15%.

4.2 Factor analysis

In this study, five factors were respectively named as tangibility, reliability, responsiveness, assurance and empathy according to the representative meaning of the problem. In the confirmatory factor analysis (CFA), the reliability and validity of the formal research data are tested.

- 4.3 Research reliability and study validity analysis
- 4.3.1 Reliability analysis

The Cronbachs  $\alpha$  coefficient was used to measure the internal consistency of the whole scale, and the values were all over 0.8, which reached the reliability level.

4.3.2 Validity analysis

The questionnaire content of this study mainly refers to the research results of experts and scholars in the past, and through the guidance, screening and modification of nearly ten experts in the industry and academia in the three circles of Panzhihua, the scale has a considerable degree of content validity. After verification, the scale also has a certain degree of construction validity.

### 4.4 Hypothesis verification analysis

In this study, for different hypotheses, the following verification results were produced by using appropriate verification tools respectively, which are described below.

H1: The service quality of nursing institutions is positively correlated with customer satisfaction. Specifically, H1.1: tangibility is positively correlated with it. H1.3: Responsiveness is positively correlated with it. H1.4: Assurance is positively correlated with it. H1.5: Empathy is positively correlated with it.

The regression analysis equation yields the following: Y=2.430+0.043X1+0.142X2+0.016X3+0.003X4+0.198X5

(Y= satisfaction, X1= tangibility, X2= reliability, X3= responsiveness, X4= assurance, X5= empathy)

At the same time, when nursing institutions provide the same quality of nursing services, customer satisfaction will show some differences due to different demographic variables. This study shows that H2 and H3 are not valid; H4 is valid.

# 5. Research conclusion

- 5.1 The connotation of measuring health care service quality can include tangibility, reliability, responsiveness, assurance and empathy.
- 5.2 Develop the modern health care service quality measurement scale (see the table below).

Table 1 "Panzhihua Modern Health Care Service Quality Measurement Scale"

Dimension	Content	Measure question item
1. Tangibility	The appearance of the construction site, hardware equipment and service personnel of the health care institution.	1. Have modern health care equipment.
		2. Have rich health care resources.
		3. With a perfect combination of medical and nursing linkage network.
		4. With a comfortable service environment.
		5. Have clean and tidy sanitary conditions.
		6. Service personnel dress appropriately and behave appropriately.
2. Reliability	The ability of the organization to accurately and reliably implement the promised matters.	7. It's orderly.
		8. The service provided is trustworthy.
		9. Reputation is well received by the society.
		10. Fulfill commitments in a timely manner.
		11. Will enthusiastically help solve problems and difficulties.
		12. Ability to deliver promised service on time.
		13. Able to record and save service data correctly.
	The subjective positive willingness of institutional service personnel to provide services, etc.	14. Staff can accurately tell when services will be completed.
3. Be responsive		15. Service staff are always ready to help.
		16. Service staff are never too busy to provide service.
		The service provided is in line with customers' expectations.
	Institution staff professional service, let customers feel at ease and trust.	18. There are contingency plans and proper handling mechanisms for emergencies.
4. Guarantee		19. Personnel have the necessary expertise and capabilities to deliver services.
		20. Complete management rules and regulations.
		21. The staff are very courteous.
		22. Staff are willing to communicate.
		23. The service provided is reassuring.
		24. The management is efficient.
		25. Have dedicated staff on duty.
		26. Can provide perfect and considerate safety facilities.

5. Empathy	The organization provides special care and attention to different customers.	27. Can provide personal care and service.
		28. Can provide convenient and thoughtful service hours.
		Be able to always consider the interests and convenience of customers.
		Can provide differentiated services for different kinds of customers.
		31. Can provide customers with satisfactory service consultation.
		32. Pay attention to customers' comments and questions.
		33. Able to coordinate external resources for special clients.

#### 5.3 In terms of hypothesis verification conclusions

After regression analysis of the factors extracted in this study, the tangibility, reliability, responsiveness, assurance and empathy of the nursing service institutions are positively correlated with satisfaction, and the resulting regression equation is shown in the above. Based on this, service quality and satisfaction can be effectively improved. At the same time, the moderating variables such as demographic variables are also scientifically analyzed and verified.

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